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SHORT COURSES

IN

AGRICULTURE

HORTICULTURE

POULTRY HUSBANDRY

DOMESTIC SCIENCE



COLLEGE PARK, MARYLAND

ISSUED QUARTERLY

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SHORT COURSES NOT STOPPED BY THE FIRE.

On the night of Friday the twenty-ninth of November, 1912, two of the largest buildings on the College Campus were burned to the ground. These buildings contained the Executive offices of the College, the public assembly room, several class rooms, the student dormitories, dining rooms, etc. Fortunately the fire did not extend to any of the technical and laboratory buildings, so that after two days occupied in securing outside boarding accommodations for the students and new quarters for the departments which had lost their homes in the fire, the normal work of the College was resumed with practically the same facilities for instruction as before the conflagration.

The next problem was to arrange quarters if possible for carrying on the short winter course work, to begin on January 6th. The public assembly hall in which all of the large classes had been met was in ashes, and the congested condition of the remaining buildings, owing to the appropriation of much of their space for extra offices and class rooms left absolutely no room where the short-course classes could carry on their work.

In this extremity, and knowing the great interest taken by Director H. J. Patterson, in all forms of Agricultural instruction as well as investigation, recourse was had to the coordinate branch of the Institution, the Agricultural Experiment Station.

Director Patterson promptly solved the difficulty. One of the buildings at the Station was being made over and fitted up for Biological laboratories for the manufacture of Hog Cholera Serum. Director Patterson invited the faculty committee to inspect this building and when they pronounced it in every way suitable for the purpose promised to put on an extra force of men and have it ready for the Short-Courses by the date set for them to begin, January 6th.

The building will have ample seating capacity, will be well lighted and heated and equipped with laboratory facilities, and modern

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conveniences for the personal comfort of those using it temporarily or permanently.

It is a matter of congratulation and apparently almost providential that a building so well suited for the work and immediately adjacent to the College should be available at the particular time when needed. A month earlier it would have been uninhabitable, a little later it would already have been occupied by the Bacteriological Staff of the Experiment Station and not available for the use of the Short-Courses.

As it is, the out-look for the short winter courses is brighter than ever. Public interest in them is growing from year to year, and the numerous inquiries being daily received indicate a larger attendance in 1913, than in any previous year.



Outline of Courses For 1913

SOILS AND MANURES.

FIRST WEEK—*January 6 to January 11.*

PROF. W. T. L. TALIAFERRO.

MR. GROVER KINZY.

Origin and classification of Soils; Relation to Water, Air, Heat; Adaptation to Crops; Improvement; Drainage; Rotation; Manures; Lime; Fertilizers.

FARM CROPS.

SECOND WEEK—*January 13 to January 18.*

PROF. W. T. L. TALIAFERRO.

MR. GROVER KINZY.

Special Lecturers—Prof. J. B. S. Norton, Prof. Thos. B. Symons, Mr. Nickolas Schmitz, Maryland Agricultural College and Experiment Station; Mr. W. O. Collier, Easton, Md.

Grain Judging and Seed Selection, Preparation of Soil for Planting, Special Fertilizing, Cultivation, Legumes and Forage Crops, Insects and Diseases Affecting Farm Crops.

DOMESTIC SCIENCE.

SECOND WEEK—*January 13 to January 18.*

The Domestic Science course will be held during the same week as the Farm Crops course. The daily programme will be found on page 7.

POULTRY HUSBANDRY.

THIRD WEEK—*January 20 to January 25.*

MR. ROY C. WAITE,

Maryland Agricultural Experiment Station.

Special Lecturers—Dr. D. E. Salmon, formerly Chief of the Bureau of Animal Industry, U. S. Department of Agriculture; Prof. C. A. Rogers, Assistant Professor, Poultry Husbandry, Cornell University; Mr. George O. Brown, Secretary Maryland Poultry and Pigeon Association; Mr. Charles L. Opperman, of Berwyn, Md., formerly of the Maryland Agricultural Experiment Station; Mr. A. R. Lee, of the U. S. Department of Agriculture; Mr. Harry Lamon, U. S. Department of Agriculture; Mr. J. Harry Wolsieffer, Poultry Editor Philadelphia Record; Mr. John H. Carter, Washington, D. C., and others.

The Poultry course will include text book work, lectures and practical demonstrations in Housing and Yards, natural and artificial Incubation, Brooding, Feeds and Feeding, Rearing Young Stock, Judging, Marketing, Killing, Dressing and Packing, Breeding.

HORTICULTURE.

FOURTH WEEK—*January 27 to February 1.*

APPLES, PEARS, PEACHES.

Lecturers and Demonstrators—Prof. Herman Beckenstrater, Prof. J. B. S. Norton, Prof. Thos. B. Symons, Mr. W. R. Ballard, Prof. C. P. Smith, Mr. F. S. Holmes, of the Maryland Agricultural College and Experiment Station; Prof. C. P. Close, Prof. A. L. Quaintance, Prof. M. B. Waite, Mr. F. P. Veitch, and Mr. E. R. Lake, of the U. S. Department of Agriculture; Mr. A. P. Cohill, of

Hancock, Md., Mr. David B. Stuart, of Baltimore, Mr. J. W. Kerr, of Denton, Md.

Propagation, Selecting Orchard Sites, Tree Planting, Pruning, Cultivation, Picking, Packing and Marketing, Insects, Diseases, Spraying.

HORTICULTURE—Continued.

FIFTH WEEK—*February 3 to February 8.*

CHERRIES, PLUMS, GRAPES, SMALL FRUITS, NUTS, TRUCK CROPS.

Lecturers and Demonstrators—Director H. J. Patterson, Prof. J. B. S. Norton, Prof. Herman Beckenstrater, Prof. Thos. B. Symons, Prof. Leroy L. Burrell, Prof. C. P. Smith, Prof. John F. Monroe, Prof. B. W. Anspen, Prof. E. N. Corey, Mr. A. B. Gahan and Mr. Thomas H. White, of the Maryland Agricultural College and Experiment Station; Prof. C. P. Close, Prof. L. C. Corbett, Mr. F. P. Veitch, of the U. S. Department of Agriculture; Mr. W. F. Allen, Salisbury, Md.; Mr. L. O. Corkran, Mr. W. Scott Whiteford, Whiteford, Md.

Propagation, Planting and Culture, Pruning, Marketing, Insects, Diseases, Spraying, Commercial canning.

FARM LIVESTOCK.

SIXTH WEEK—*February 10 to February 15.*

HORSES AND BEEF CATTLE.

Associate Prof. Robert H. Ruffner. Special Lecturers—Director H. J. Patterson, Dr. S. S. Buckley, Prof. W. T. L. Taliaferro, Maryland Agricultural College and Experiment Station.

FARM LIVE STOCK—Continued.

SEVENTH WEEK—*February 17 to February 22.*

SHEEP AND SWINE.

Associate Prof. Robert H. Ruffner. Special Lecturers—Mr. R. J. Carr, U. S. Department of Agriculture; Mr. R. Bringham, Brinklow, Md.; Mr. Roy Brooks, Emmorton, Md.; Mr. A. M. Fulford, Bel Air, Md.

FARM LIVE STOCK—Continued.

EIGHTH WEEK—*February 24 to March 1.*

FARM DAIRYING.

Associate Professor Robert H. Ruffner. Special Lecturers—Dr. Charles O. Appleman, Dr. S. S. Buckley, D. V. S., Maryland Agricultural College and Experiment Station; Dr. Blanck, Baltimore City Health Department; Mr. Wolcott, U. S. Department of Agriculture; Mr. B. D. White, Baltimore, Md.

FARM MACHINERY AND ENGINES.

NINTH WEEK—*March 3 to March 8.*

PROF. W. T. L. TALIAFERRO.

Special lecturers and demonstrators on Gasoline Engines, Motor Wagons, etc.

Elementary Principles of Mechanics, Farm Implements and Machines, Gasoline Engines and Motors.

CARPENTRY, BLACKSMITHING AND PIPE FITTING.

TENTH WEEK—*March 10 to March 15.*

PROF. HARRY GWINNER.

ASSOCIATE PROF. H. L. CRISP.

Sharpening and Fitting Tools; Practical Lessons in the Carpenter and Blacksmith Shops, and in Pipe Fitting.

Domestic Science Course

DAILY PROGRAMME.

MONDAY, JANUARY 13.

P. M.

1:30— 2:30—Fibres and Textiles.

Mrs. E. P. Foulk, Professor Home Economics,
Ohio State University.

2:30— 4:00—Bacteriology.

Dr. Charles O. Appleman, Maryland Agricultural Experiment Station.

4:00— 5:00—Visit to Bacteriological Laboratory at the Maryland Agricultural Experiment Station.

TUESDAY, JANUARY 14.

A. M.

9:30—11:00—Bread Making.

Mrs. Foulk.

11:00—12:00—Ventilation.

Mrs. H. J. Patterson, College Park, Md.

P. M.

1:30— 3:00—First Aid to the Injured.

Dr. Martha Brewer Lyon, Washington, D. C.

3:00— 4:00—Sewing and Dress Planning.

Mrs. Foulk.

4:00— 5:00—Inspection of College Buildings.

8:00— 9:00—House Furnishing.

Mrs. Foulk.

WEDNESDAY, JANUARY 15.

A. M.

9:30—11:00—Principles of Cooking Starches.
Mrs. Foulk.

11:00—12:00—Disposal of Waste.

W. T. L. Taliaferro, Maryland Agricultural
College.

P. M.

1:30— 3:00—First Aid to the Injured—Class Work.
Dr. Lyon.

3:00— 4:00—Canning.
Mrs. Foulk.

4:00— 5:00—Inspection of College Sewerage Disposal Plant.

THURSDAY, JANUARY 16.

A. M.

9:30—10:30—Principles of Cooking Protein.
Mrs. Foulk.

10:30—12:00—Cutting up of Beef. Demonstration.

P. M.

1:30— 3:00—Household Chemistry.
Dr. Appleman.

3:00— 4:00—Planning Meals.
Mrs. Foulk.

4:00— 5:00—Inspection of Experiment Station Poultry Plant.

8:00— 9:00—Fireless Cooking.
Miss Weer, Baltimore County, Md.

FRIDAY, JANUARY 17.

A. M.

9:30—11:00—Vegetables.

Mrs. Foulk.

11:00—12:00—The Care of Milk.

Dr. Appleman.

P. M.

1:30— 3:00—The Chemistry of Cleaning.

Miss Emma S. Jacobs, Director Domestic Science
in Public Schools, Washington, D. C.

3:00— 4:00—Planning Meals.

Mrs. Foulk.

4:00— 5:00—Inspection of Dairy Barn.

SATURDAY, JANUARY 18.

A. M.

9:30—11:00—Planning Meals.

Mrs. Foulk.

11:00—12:00—Household Chemistry.

Dr. Appleman.

NOTE.—The college 'bus will each morning meet the 9:00 trolley from Washington and the 9:10 trolley from Laurel. In the afternoon the 'bus will carry passengers from the college to meet the 5:40 and 5:30 trolley cars.

Table for Canning Fruit. From Ohio Agricultural College Extension Bulletin, November, 1910, by Mrs. Elma Perry Foulk.

Page references in these tables refer to original bulletin.

TABLE FOR CANNING FRUIT

Fruits.	Nature of Fruit.	Strength of Syrups. See (page 5).	Methods and Time for Heating with Each Method.	Remarks.
CHERRIES AND PLUMS (Sweet)...	Soft	1 pint sugar to 1½ pints water.	Open kettle (page 5), until scald- ed through and through, or about 15 minutes.	If cherries have too strong a fla- vor, heating without syrup in steam cooker for about 20 minutes, pour- ing off juice, and then adding syrup, and heating the remaining 10 min- utes will improve flavor. Juice thus poured off saved for mincemeat, etc.
	Soft	1 pint sugar to 1 pint water.	Oven (page 7), 20 minutes.	
			Steam cooker (page 8), 30 min- utes.	
			Fireless cooker (page 8), 1 hour.	
BLACKBERRIES AND RASPBERRIES	Soft	1 pint sugar to 1½ to 2 pints water.	Kettle (page 5) until scalded, or about 10 minutes.	Appearance of berries will be much improved by using one of the meth- ods of heating in the can. Berries may be placed in kettle with the dry sugar, allowed to stand for several hours, heated slowly in kettle until boiling point is reached and then boiled 10 minutes.
			Oven (page 7), 20 minutes.	
			Steam cooker (page 8), 30 min- utes.	
			Fireless cooker (page 8), 45 min- utes to 1 hour.	
STRAWBERRIES ...	Soft	1 pint sugar to ¾ to 1 pint water.	Same as other berries.	Strawberries require a large amount of sugar to preserve color and shape. Usually to 1 pound ber- ries allow ¾ pound sugar.
GRAPES	Soft	1 pint sugar to ¾ to 1 pint of water.	Kettle (page 5), 15 minutes. Oven (page 7), 20 minutes. Steam cooker (page 8), 30 min- utes. Fireless cooker (page 8), 45 min- utes to 1 hour.	In kettle method sugar is added to grapes instead of making a syrup. Use about 1/6 as much sugar as fruit. The exact amount of sugar will vary according to sweetness of fruit.
GOOSEBERRIES AND RHUBARB...	Soft and contain much acid.	1 pint sugar to 1 pint water.	May be canned exactly as berries given above.	Gooseberries and Rhubarb contain enough acid to be canned cold.

TABLE FOR CANNING FRUIT—Continued

Fruits.	Nature of Fruit.	Strength of Syrups. See (page 5).	Methods and Time for Heating with Each Method.	Remarks.
PEACHES	Soft	1 pint sugar to 2 pints water.	Open kettle (page 5), 10 to 20 minutes, according to variety. Oven (page 7), 30 minutes or until tender. Steam cooker (page 8), 30 to 45 minutes. Fireless cooker (page 8), 45 minutes to 1 hour.	Peaches are easily pared by dropping into hot water.
APPLES, PINEAPPLES, PEARS AND QUINCES....	Hard	1 pint sugar to 2 pints water.	Open kettle (page 5), until tender. Oven (page 7), after boiling until tender in water, allow 15 minutes. Steam cooker (page 8), after boiling until tender allow 20 minutes. Fireless cooker (page 8), after tender allow 30 minutes.	These fruits boiled in clear water until nearly tender.

TABLE FOR CANNING VEGETABLES

Vegetables.	Preparation.	Heating on First Day.	Heating on Second and Third Days.	Amount of Salt.	Remarks.
ASPARAGUS	Cut in lengths to fit cans. Pack with tips up.	In can for 1 hour.	Timed from boiling of water in cooker or boiler. 45 minutes each day.	1 teaspoonful salt to 1 quart boiling water. Enough to fill the jars.	
BEANS (String)....	String and cut in to $\frac{1}{2}$ -inch pieces.	Cook until tender in open kettle. Fill jars, cover with boiling water and seal.	1 hour each day.	No salt. Beans are toughened by salt.	

TABLE FOR CANNING VEGETABLES—Continued

Vegetables.	Preparation.	Heating on First Day.	Heating on Second and Third Days.	Amount of Salt.	Remarks.
BEANS (Lima).....	Shell and can at once after shelling.	Cook in kettle until tender. Fill jars, cover with boiling water and seal.	1 hour each day.	No salt. (See string beans.)	
BEEETS	Select young red beets.	Cook in kettle until skins are loose. Heat in cans 30 minutes.	50 minutes each day.	1 teaspoonful salt to 1 quart boiling water. Enough to fill the jars.	If mild pickle is desired, take equal parts vinegar and water. Sugar to taste.
CORN	Cut from cob, being careful not to cut too near to cob.	Heat in kettle until well scalded, using just enough hot water to prevent scorching.	1 hour each day.	1 teaspoonful salt to 1 quart boiling water. Enough to fill the jars.	Corn is a poor conductor of heat and the first heating in the kettle insures its being hot enough, also allows corn to swell.
EGG PLANT.....	Slice thin, drop into clear boiling water, boil for 15 to 20 minutes. Drain, pack in jar.	Heat in can for 1 hour.	1 hour each day.	1 teaspoonful salt to 1 quart water. Enough to fill the jars.	
PEAS	Place shelled peas in a cheese cloth bag or wire basket, boil five minutes, and remove yellow peas. If the bag or basket is then placed a moment in cold water the peas will plump up and become firm.	Either cook in open kettle until tender and then can, or cook in jar for 1 hour.	1 hour each day.	No salt. Peas, like beans, are toughened by salt.	
SPINACH	Boil 5 minutes and place in jars.	Cook in cans for 45 minutes.	40 minutes each day.	$\frac{1}{2}$ teaspoonful of salt to quart can.	
TOMATOES	Pare by scalding with water and then chilling in cold water. Place in jars.	Heat in can for 1 hour. If not desired whole, cut in smaller pieces and heat for from 30 to 45 minutes.	Not necessary.	1 teaspoonful of salt to 1 quart of tomatoes.	Spoiling due to yeasts and molds; one heating, therefore, being all that is necessary.

DOMESTIC SCIENCE.

The success of the Domestic Science course last March was gratifying in the extreme to those in charge of it. It was a radical innovation on the time honored policy of the college as a school for the male sex only, but it was an innovation which was needed and established a new policy. The College again opens its doors to the women and extends a cordial invitation to every woman interested in this work to look over the Domestic Science programme and if she feels the course, or any part thereof, will be helpful to her, then to come to the college and take all the work or such part of it as may offer a solution of her household problems.

In the time allowed it is of course not possible to cover every phase of so large and complex a subject as Domestic Science, but the organizers of the course have gone over the field carefully and it is believed but few women will not find much of interest and benefit in the intelligent discussions and demonstrations of the topics selected.

The course for 1913 covers necessarily part of the ground gone over in 1912, but much of it will be along new lines.

More than ninety women were enrolled in the 1912 course. The college is hopeful that with the even better accommodations offered in the rooms at the experiment station, the attendance will greatly exceed that of last winter.

COW JUDGING CONTESTS AT COUNTY FAIRS.

The inauguration of boys' judging contests at the county fairs is a move in the right direction and should have the active moral and financial support of all members of the community. Haggertown, Laurel and Timonium have held such contests, offering substantial money rewards to the successful contestants.

The other fairs should follow the good example of these. The cow judging contest at Timonium developed a keen rivalry between the youthful contestants, not only as individuals, but for the schools which they represented. Yet it was only a good natured rivalry which engendered no bad feeling, but only a stronger determination

on the part of each to win, if not this time then, by help of this experience, next time.

The same spirit was evidenced at Laurel and Hagerstown and it is safe to say that every boy in any contest whether he received a premium or not, gained an insight into cow selection that he could not have obtained in any other way and which will serve him in good stead as a stockman in the practical handling of his own cattle.

Students of the Maryland Agricultural College met with varied success. At Hagerstown they were defeated by a team from the Delaware Agricultural College in an inter-collegiate contest. At Timonium and Laurel they won a majority of the prizes, though at Laurel they numbered but twenty-six out of sixty-six contestants, their combined winnings being seventy-seven and a half dollars, out of a total of one hundred. Second place in number of prizes, at Laurel, was won by students of the Montgomery High School, at Sandy Spring, and Brookville, combined, under Mr. S. W. Gray, as teacher of Agriculture.

These judging contests could well be extended to take in grains and other farm products.

SUMMARY.

Absolute cleanliness and the use of good materials are essential in the preservation of fruits and vegetables.

Sugar is not necessary in fruit canning, and it is only when used in large quantities, as in preserves, that it acts as a preservative. Beet sugar is not the cause of spoiling.

The heating of fruits in an open kettle and sealing in sterilized jars is not the best method, since germs are likely to enter the cans during filling.

Some method of heating in the can, by use of the oven, steam cooker, washboiler or fireless cooker is the easiest and safest way.

Canning powders are unnecessary and their use is condemned.

Heating vegetables on three consecutive days is necessary to insure their keeping.

Commercial canning on a small scale will often be found profitable.



